

Daily Status Report May 28 2010.

We have made good progress today and, over the last 2 days, have covered an area described by a rectangle (you will shortly receive a map) ca. 77Km EW and 14Km NS, with the spill site dead center.

In addition to the 4 corners of this rectangle, we occupied stations on the perimeter due N and due S of the source. All fluorescence traces were clean from the surface to the bottom.

Due to refrigerated space constraints we weren't able to take samples for analysis from all stations, but should come back with a full load of samples tomorrow night.

As I'm writing this we are heading to a site ca. 19Km due E of the spill site, i.e. in "the center of the right-hand half of our rectangle". This will take us until midnight, and at first light we will visit the center of the left-hand half of our rectangle, i.e. 19Km due W of the source.

We are aiming to pick up the WSW plume at that point.

We occupied 4 sites today (VO 5, VO6, VO7, VO8). All were 'clean' (no noticable fluorescence peaks at any depth), and refrigerated space constraints dictated that we only saved one set (VO6) for analysis. Files describing stations sampled, a position map and CTD summaries are attached

A file describing particulate (LISST) analyses is attached although there was no comparison with dispersed oil as none was detected.

We have worked through a lot of our earlier teething problems, and have made repairs to the pump serving the CTD system, and fixed the altimeter. We lost the fluorometry trace for a while, although this is back up, and although we still have no DO from the CTD array, we still have the hand-held probe option.

With respect to DO, I have put together a chronology of our work on dissolved oxygen analysis (see attached file), and while it still needs refining, it provides a narrative of the issues that we have worked through. In general the low DOs recorded by the La Motte colorimetric method were resolved during a cross-calibration exercise that I initiated, although there was still some variability associated with this method (one batch of high readings were recorded). My impression is that the CTD reading and the hand-held probe readings correlate well. The colorimetric analyses sometimes do, sometimes don't. The La Motte test kits ran out at the end of the last Brooks McCall cruise, and my inclination is not to renew them.

We now see no reading at or less than 2mg/L DO and no significant dip in DO associated with the dispersed oil plume. CTD files should be consulted for CTD data from depth profiles.

Re. data transfer/format, I think that it is timely that as we've worked through a lot of other logistic problems, streamlining of data transfer/presentation has come to the fore. Sam Tormey,

who was with me on the last Brooks McCall cruise was instrumental in this regard and I understand that he and some of his NOAA colleagues have been charged with standardizing and streamlining data flow.

Before we sailed, Sam came aboard this vessel (Ocean Veritas) and briefed Andrew Mason (copied on this email), who is performing the data presentation/transfer duties aboard this ship. Sam's group would be enormously helpful in this role, and I urge Derek to work with this group through Andrew. Andrew will be instrumental in improving the network capabilities of the Ocean Veritas.

We have generally better IT capabilities on O Veritas than Brooks McCall (WiFi network more or less throughout the ship, but tend to lose our satellite link from time to time). Transfer of large files (even >1MB) are a real problem aboard Brooks McCall, a real liability on an otherwise very good vessel. That vessel will greatly benefit from an upgrade.

We are currently still processing the last cast, so files from Andrew may be a while longer and will arrive separately. One file on DO is attached here.

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